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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/708,361	02/26/2004	Diana Yanakiev	81079897 FMC 1644 PUS	2360
28395	7590	03/03/2009		
BROOKS KUSHMAN P.C./FGTL 1000 TOWN CENTER 22ND FLOOR SOUTHFIELD, MI 48075-1238			EXAMINER BEHNCKE, CHRISTINE M	
			ART UNIT 3661	PAPER NUMBER
			MAIL DATE 03/03/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/708,361	<b>Applicant(s)</b> YANAKIEV, DIANA	
	<b>Examiner</b> CHRISTINE M. BEHNCKE	<b>Art Unit</b> 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-16, 18-23, 27 and 28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-5 and 7-13 is/are allowed.
- 6) ☒ Claim(s) 14, 22, 23, 27 and 28 is/are rejected.
- 7) ☒ Claim(s) 15, 16, 18-21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

This office action is in response to the Remarks filed 11/21/2008; claims 1-5, 7-16, 18-23, 27 and 28 were presented for examination.

#### ***Response to Arguments***

Applicant's arguments filed 11/21/2008 have been fully considered but they are not persuasive. Applicant contends the applied reference Saito does not describe the first gain being a non-decreasing function of the absolute value of the first error, but merely a constant value. The Examiner respectfully disagrees. The broadest reasonable interpretation of "function" is merely a mathematical relation and "non-decreasing" does not explicitly exclude a constant gain. Applicant seems to imply that the claim recites a more explicit equation relationship; however this relationship is not claimed. Further, the gain applied to the speed change is a non-decreasing function of the absolute value of the first error, as described by Saito in column 11, lines 41-64.

Regarding claims 22 and 27, Applicant contends Saito does not describe the vehicle request being a nonlinear, increasing function of the first error. The Examiner respectfully disagrees and refers Applicant to column 11, lines 17-27.

#### ***Claim Rejections - 35 USC § 102***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 14, 22, 23, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito, US 5,835,878.

(Claim 14) Saito describes a method for controlling a vehicle using nonlinear error-based control comprising: determining a current value indicative of a vehicle speed (column 11, lines 17-23); determining a first speed error, the first speed error being a difference between a target speed and the current value of the speed (column 11, lines 17-23); and applying a first gain to the first speed error, thereby producing a speed control system desired acceleration, the first gain being a non-decreasing function of the absolute value of the first error (column 11, lines 41-64).

(Claim 22) Saito describes a vehicle comprising: at least one torque producing device including an engine (column 1, lines 5-13); a throttle operable to control the flow of air to the engine (column 1, lines 5-13); at least one sensor configured to measure a vehicle parameter and to output signals related to the measured parameter (column 10, lines 49-53); and a controller configured to receive signals from the at least one sensor (MPU 101), determine a first error, and determine a vehicle request, thereby facilitating control of the at least one torque producing device (acceleration deviation 21), the first error being a difference between a target value of the vehicle parameter and a measured value of the vehicle parameter (step 21 and 21a, and column 11, lines 24-41), the vehicle request being a nonlinear, increasing function of the first error usable to determine an angle of the throttle (column 11, lines 24-41).

(Claim 23) Saito further describes wherein the vehicle request is used to determine an amount of torque requested from the at least one torque producing device (column 1, lines 5-13).

(Claim 27) Saito describes a vehicle comprising: at least one torque producing device including an engine (column 1, lines 5-13); an electric power source operable to provide electricity to the motor (column 7, lines 41-55); at least one sensor configured to measure a vehicle parameter and to output signals related to the measured parameter (column 10, lines 49-53); and a controller configured to receive signals from the at least one sensor, determine a first error, and determine a vehicle request, thereby facilitating control of the at least one torque producing device (acceleration deviation 21), the first error being a difference between a target value of the vehicle parameter and a measured value of the vehicle parameter (step 21 and 21a, and column 11, lines 24-41), the vehicle request being a nonlinear, increasing function of the first error usable to determine the amount of electricity provided to the motor (column 11, lines 24-41).

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Saito in view of Mianzo, US 6,347,680.

Saito describes a vehicle comprising: at least one torque producing device including an engine (column 1, lines 5-13); at least one sensor configured to measure a vehicle parameter and to output signals related to the measured parameter (column 10, lines 49-53); and a controller configured to receive signals from the at least one sensor (MPU 101), determine a first error, and determine a vehicle request, thereby facilitating control of the at least one torque producing device (acceleration deviation 21), the first

Art Unit: 3661

error being a difference between a target value of the vehicle parameter and a measured value of the vehicle parameter (step 21 and 21a), the vehicle request being a nonlinear, increasing function of the first error usable to control the output of the engine (step 22). Saito does not describe the engine being a diesel engine or the intended use of determining a fueling rate of the engine. However, Mianzo teaches the control of a throttle for a desired engine speed, wherein Mianzo teaches the application of the throttle control system to a electronically controlled diesel engine (column 3, lines 9-15), and wherein by controlling the throttle of the engine determines the fueling rate of the engine to control the output speed (column 4, lines 26-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Saito with the teachings of Mianzo because Saito suggests the invention may be adapted to other power systems other than by electric motor (column 1, lines 5-13) and it was well known that controlling the fueling rate of the engine is merely another means of controlling the output speed.

#### ***Allowable Subject Matter***

Claims 1-5 and 7-13 are allowed.

Claims 15, 16, 18 - 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE M. BEHNCKE whose telephone number is (571)272-8103. The examiner can normally be reached on 8:30 am- 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas G. Black can be reached on (571) 272-6956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3661

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas G. Black/  
Supervisory Patent Examiner, Art Unit 3661